

CONFIDENTIAL

PRIORITY

~~OPS - INTELLIGENCE~~  
~~OPS - INTELLIGENCE~~

X

COMER, AFED (~~AFED~~), LOS ANGELES, CALIF.

COMER, AEDC, ANDREWS AFB, WASHINGTON, D.C.

AP  
DOWNGRADED AT 3 YEAR INTERVALS  
DECLASSIFIED AFTER 12 YEARS.  
DOD DIR 5200.10

INFO: HQS USAF, WASHINGTON, D.C. (AFCOM AND AFMAG)

MR. HERSCHEL BROWN, LOCKHEED AIRCRAFT CORPORATION, MISSILES  
SYSTEMS DIVISION, GUNNERSVILLE, CALIF.

SECRET/WDG-11-33-E.

PERSONAL FROM MAJOR GENERAL RITLAND TO LT GENERAL SCHRIEVER. THIS  
MSG IN THREE PARTS. PART I. FOR YOUR INFORMATION AND BACKGROUND,  
THE FOLLOWING INFORMATION ON DISCOVERER VIII IS SUBMITTED. THIS  
INFORMATION IS PRELIMINARY AND WILL BE CONFIRMED AND AMPLIFIED  
AS ADDITIONAL INFORMATION BECOMES AVAILABLE. DISCOVERER VIII  
WAS SUCCESSFULLY LAUNCHED AT 1125 PST, 20 NOVEMBER 59. THE  
PERFORMANCE WAS NOMINAL. THE AGENDA VEHICLE PERFORMANCE WAS AS  
EXPECTED EXCEPT THAT INTEGRATOR CUTOFF OF THE SECOND STAGE WAS NOT  
OBTAINED. THIS RESULTED IN AN OVER VELOCITY OF APPROXIMATELY  
EIGHT HUNDRED FEET PER SECOND AND CAUSED A HIGHLY ECCENTRIC ORBIT  
WITH A PERIOD OF 103.7 MINUTES. THIS PERIOD WAS BEYOND THE  
TOLERANCE OF THE TIMER CONTAINED IN THE VEHICLE AND TO COMPENSATE

22 2011  
NOV 1959

WD20

COL H. L. EVARS, USAF  
2211

1

G. J. RITLAND  
Major General, USAF  
Commander

WDG-11-33-E

~~CONFIDENTIAL~~

SECRET

~~CONFIDENTIAL~~

CORNER, AFBED (IR ARDC), LOS ANGELES, CALIF.

(WEG-11-33-B)

FOR THIS UNUSUALLY LONG PERIOD, THE TIMER WAS ADJUSTED IN A MANNER TO PERMIT EJECTION AND THE RECOVERY SEQUENCES TO OCCUR AS NEARLY AS POSSIBLE TO THE PLANNED IMPACT AREA. THE COMMANDS RECEIVING THE TIMER WERE SUCCESSFULLY TRANSMITTED TO THE VEHICLE, ACKNOWLEDGED AND ACTED UPON. THE NET RESULT OF THESE COMMANDS WAS TO INITIATE THE RECOVERY SEQUENCE ON THE FIFTEENTH VEHICLE PASS. DURING THE ENTIRE FLIGHT PERIOD, ALL VEHICLE SUBSYSTEMS FUNCTIONED PROPERLY. THE RECOVERY SEQUENCE WAS INITIATED AT APPROXIMATELY 1322 PST, 21 NOVEMBER. SEPARATION OF THE RECOVERY CAPSULE FROM THE VEHICLE WAS CONFIRMED BY THE JOE E. MANN TELEMETRY SHIP. PRELIMINARY REDUCTION OF CAPSULE TELEMETRY INDICATES THAT THE 8TH ROCKETS, THE RETRO ROCKET, AND AT LEAST ONE OF THE TWO DE-SPIN ROCKETS OPERATED. FURTHER, THE THRUST COILS AND RETRO-ROCKET WERE JETTISONED. RECOVERY CAPSULE TELEMETRY WAS RECEIVED BY THE JOE E. MANN UP TO THE POINT OF IONIZATION BLACKOUT AND THERE ARE SOME INDICATIONS OF ADDITIONAL TELEMETRY HAVING BEEN RECEIVED SUBSEQUENT TO THE CAPSULE EMERGENCE FROM THE BLACKOUT ZONE. TRACKING INFORMATION OBTAINED FROM THE TELEMETRY RECORDS WAS SUBJECTED TO ROUGH TRAJECTORY ANALYSIS AND, AS A RESULT, THE RECOVERY FORN WAS SHIFTED SOUTH APPROXIMATELY TWO HUNDRED MILES. BECAUSE OF THE AMOUNT OF TELEMETRY WHICH HAS BEEN RECEIVED ON THIS FLIGHT, IT WILL BE SEVERAL DAYS BEFORE A COMPLETE FIRST LOOK WILL HAVE BEEN ACCOMPLISHED. I WILL PROVIDE YOU ADDITIONAL INFORMATION AS IT BECOMES AVAILABLE.

~~CONFIDENTIAL~~

PART II. DURING THE PAST TEN MONTHS A TOTAL OF SEVEN DISCOVERIES

SECRET

~~CONFIDENTIAL~~

SECRET

CCDR, AFMCD (HQ ARDC), LOS ANGELES, CALIF.

(WDT-11-33-2)

VEHICLES HAVE BEEN LAUNCHED. ON ALL EIGHT LAUNCHES, BOTH THE THOR AND THE AGESA PROPULSION SYSTEMS HAVE OPERATED ONE HUNDRED PER CENT OF THE TIME AND WITH VERY MINOR EXCEPTIONS IN TOTAL IMPULSE HAVE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS. ALL DISCOVERER SUBSYSTEMS, WITH THE EXCEPTION OF THE RECOVERY SUBSYSTEM AND THE GUIDANCE SUBSYSTEM, HAVE PERFORMED EFFECTIVELY WITH A VERY LIMITED NUMBER OF FAILURES OCCURRING IN THE POWER SYSTEM AND IN THE AIRBORNE COMMUNICATIONS PACKAGE. THE DIFFICULTIES WHICH WE HAVE ENCOUNTERED WITH THE GUIDANCE SUBSYSTEM AND THE RECOVERY SUBSYSTEM HAVE STILL PREVENTED THE DEMONSTRATION OF THE FLEXIBILITY OF OUR RECOVERY FORCE AND, ALTHOUGH A SUCCESSFUL RECOVERY HAS NOT YET BEEN ACCOMPLISHED, EXTREMELY VALUABLE EXPERIENCE IN THE COMMAND AND CONTROL OF SATELLITE VEHICLES AND THE DIRECTION AND EXERCISE OF THE RECOVERY FORCE HAS BEEN ACCOMPLISHED. THE BASIC DESIGN OF THE DISCOVERER <sup>VEHICLE</sup> ~~SYSTEM~~ HAS ~~BEEN~~ PROVEN. PART III. DESPITE THE SUCCESSSES TO DATE OF THE DISCOVERER SERIES, IT IS MY FIRM CONVICTION THAT A SYSTEMATIC AND INTENSIVE REVIEW OF PROGRESS MUST BE MADE. THE GUIDANCE AND THE INTEGRATOR CUTOFF OF THE PROPULSION SYSTEM HAS NOT PERFORMED SUFFICIENTLY WELL TO SATISFY ME. THE GROUND TESTING PROGRAM FOR THE RECOVERY SUBSYSTEM MUST BE REVISED TO DETERMINE WHAT ADDITIONAL TESTING MUST BE INSTITUTED TO INSURE PROPER OPERATION. ~~REVIEWING SUCH A REVIEW BY AFMCD AND THE~~ ~~THOR CONTRACTOR, THE DECISION TO SET THE NEXT LAUNCH DATE WILL~~

~~CONFIDENTIAL~~

WDD

3-4

SECRET

HLR

~~CONFIDENTIAL~~

SECRET

COMER, AFED (HQ ARDC), LOS ANGELES, CALIF.

(WDG-11-33-E)

BE POSTPONED UNTIL A CAREFUL REVIEW OF ALL TELETYPE INFORMATION  
AND THOSE ANALYSES DEEMED NECESSARY AS A RESULT OF THIS  
INFORMATION HAVE BEEN MADE.

RECENT FUNDING CUTS FOR BOTH FY 60 AND FY 61 POINT TO SOME PROGRAM  
READJUSTMENT. UNTIL ALL OF THE TECHNICAL AND FUNDING ASPECTS OF  
THE DISCOVERER PROGRAM ARE REVIEWED BY AFED AND THE PRIME  
CONTRACTOR, I AM SUSPENDING THE FLIGHT TEST PHASE OF THE PROGRAM.  
SUCH A REVIEW IS ALREADY UNDER WAY AND I WILL PROVIDE YOU A  
BRIEFING OF THE RESULTS AND MY RECOMMENDATIONS EARLY IN DECEMBER.

WDG

SECRET

FILE